

Please amend the specification as follows:

Please amend the Title as follows:

LOW COST AREA ARRAY PROBE

In the Claims:

1. (amended) Apparatus for testing circuitry having an array of solder-ball contacts or connection probes of a selected size, said solder-ball contacts having a contact area and a peripheral area, comprising:

- a support substrate having a working surface;
- a multiplicity of conductive pads mounted on said working surface;
- a multiplicity of conductive pathways extending from said multiplicity of conductive pads to test circuitry;
- at least one conductive member formed on each of said multiplicity of conductive pads and extending away from said working surface, said at least one conductive member comprising a wire bonder stud bump; and
- said conductive members formed on said conductive pads positioned on said support substrate to make an electrical connection with said peripheral area of said solder-ball contacts or connection points of a circuit placed against said apparatus.

Please cancel Claims 7 to 9 without prejudice.

10. (amended) The apparatus of Claim 1 wherein said support substrate comprises a planar insulating material and said conductive pathways comprise conductive traces formed on said planar insulating material.

Please cancel Claim 13 without prejudice.

14. (amended) The apparatus of Claim 1 wherein one or more of said conductive members comprise wire bonder stud bumps bonded on top of another wire bonder stud bump.

Please cancel Claims 15 and 16 without prejudice.

17. (amended) Apparatus for testing circuitry having an array of solder-ball contacts of a selected size with a contact area and peripheral area, comprising:
a planar insulating support substrate having a working surface and a back surface;

a multiplicity of conductive pads formed on said working surface;
conductive pathways formed on said working surface leading from said multiplicity of conductive pads to testing circuitry;

at least three conductive lengths of wire extending away from said working surface bonded to a selected one of said multiplicity of conductive pads by a wire bonding machine to form an interconnecting nest; and

said interconnecting nest positioned on said support substrate to receive a solder-ball contact point and making an electrical connection with said peripheral area of said received solder-ball for testing said circuitry.

Please cancel non-elected Claims 18 to 25 without prejudice

Please add the following new claims.

26. (new) Apparatus for testing circuitry having an array of solder-ball contacts or connection probes of a selected size, said solder-ball contacts having a contact area and a peripheral area, comprising:

a support substrate having a working surface;
a multiplicity of conductive pads mounted on said working surface;
a multiplicity of conductive pathways extending from said multiplicity of conductive pads to test circuitry;

at least one conductive member formed on each of said multiplicity of conductive pads and extending away from said working surface, said at least one conductive member comprising a wire having first and second ends bonded to said conductive pad; and

said conductive members formed on said conductive pads positioned on said support substrate to make an electrical connection with said peripheral area of said solder-ball contacts or connection points of a circuit placed against said apparatus.

27. (new) The apparatus of Claim 26, wherein a point on said wire between said first and second ends is raised off of said conductive pad.

28. (new) The apparatus of Claim 27, wherein said raised point of said wire is supported by mold compound.

29. (new) An apparatus for testing an integrated circuit having solder ball interconnects, comprising:

a substrate;

a plurality of pads on said substrate;

a plurality of wire bonder stud bumps on at least one of said plurality of pads, whereby said stud bumps form a nest for contacting one of said solder ball interconnects.

30. (new) The apparatus of Claim 29, further comprising a wire extending from said stud bump away from said substrate.

31. (new) The apparatus of Claim 29, wherein said stud bump and said wire are gold.

32. (new) The apparatus of Claim 29, wherein said stud bump and said wire are aluminum.